

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

Project No. Site 995

Waimanalo Gulch Landfill

Lot #: D8K260197

Stormwater

Justin Lottig

Waste Management, Inc.
Waimanalo Gulch Landfill
92-960 Farrington Highway
Kapolei, HI 96707

Cc: John Fong, Earth Tech

TestAmerica Laboratories, Inc.



Betsy Sara
Project Manager

December 15, 2008

Table Of Contents

Standard Deliverables

Report Contents	Total Number of Pages
<p><i>Standard Deliverables</i></p> <p>The Cover Letter and the Report Cover page are considered integral parts of this Standard Deliverable package. This report is incomplete unless all pages indicated in this Table of Contents are included.</p> <ul style="list-style-type: none">• Table of Contents• Case Narrative• Executive Summary – Detection Highlights• Methods Summary• Method/Analyst Summary• Lot Sample Summary• Analytical Results• QC Data Association Summary• Chain-of-Custody	<div style="border: 1px solid black; width: 100px; height: 100px;"></div>

Case Narrative

Enclosed is the report for one sample received at TestAmerica Denver laboratory on November 26, 2008. The results included in this report have been reviewed for compliance with TestAmerica Denver's Laboratory Quality Manual. The results relate only to the samples in this report and meet all requirements of NELAC and any exceptions are noted below.

This report may include data with reporting limits (RLs) less than TestAmerica Denver's standard reporting limits. These data and reporting limits are being used specifically to meet the needs of this project. Note that, data are not customarily reported to these levels without qualifiers, because they are inherently less reliable and potentially less defensible than the latest industry standards require. Please contact TestAmerica Denver for more details.

Dilution factors and footnotes have been provided to assist in the interpretation of the results. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interferences or analytes present at concentrations above the linear calibration curve, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Denver utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. A summary of quality control parameters is provided below.

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Quality Control Summary for Lot D8K260197

Sample Receiving

The cooler temperature upon receipt at the Denver laboratory was 2.7°C.

All sample bottles were received in acceptable condition.

Holding Times

The analysis for Total Suspended Solids Method 2540 D for the sample W GSL-DB01E was performed two days outside of the 7-day holding time due to more than half of the hold time expiring during transit. It is TestAmerica's policy to analyze all samples within holding times, but when samples are received with less than half the hold time remaining, this can not be guaranteed.

All other holding times were met.

Method Blanks

Total Phosphorus Method 365.3 was detected in the Method Blank below the project established reporting limit. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.

All other Method Blanks were within established control limits.

Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

Sample W GSL-DB01E was selected to fulfill the laboratory batch quality control requirements for Method 625. Analysis of the laboratory generated MS/MSD for this sample provided recoveries of 3,3'-Dichlorobenzidine and Benzidine below the lower control limits indicating the possible presence of a matrix interference.

The Method 410.4 MS/MSD performed on a sample from another client exhibited a RPD result outside the RPD limit for Chemical Oxygen Demand (COD). Because the corresponding Matrix Spike and Matrix Spike Duplicate recoveries, Laboratory Control Sample, and Method Blank sample were within control limits, this anomaly is considered to be due to matrix interference and no corrective action was taken.

The method required MS/MSD could not be performed for Method 1664A HEM due to insufficient sample volume, however, a LCS/LCSD pair was analyzed to demonstrate method precision and accuracy.

All other MS and MSD samples were within established control limits.

EXECUTIVE SUMMARY - Detection Highlights

D8K260197

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
WGSL-DB01E 11/22/08 12:30 001				
Iron	1200	100	ug/L	MCAWW 200.7
Zinc	8.4 B	20	ug/L	MCAWW 200.7
Total Kjeldahl Nitrogen	0.67	0.50	mg/L	MCAWW 351.2
Nitrate-Nitrite	2.2	0.10	mg/L	MCAWW 353.2
Field pH	7.36	0.1	No Units	MCAWW 150.1
Total phosphorus	0.21 J	0.050	mg/L	MCAWW 365.3
Total Suspended Solids	4.8	4.0	mg/L	SM18 2540 D
HEM (Oil and Grease)	2.7 B	5.0	mg/L	CFR136A 1664A HEM
Ammonia as N	0.058 B	0.10	mg/L	MCAWW 350.1
Chemical Oxygen Demand (COD)	19 B	20	mg/L	MCAWW 410.4

METHODS SUMMARY

D8K260197

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Base/Neutrals and Acids	CFR136A 625	CFR136A 625
Chemical Oxygen Demand	MCAWW 410.4	MCAWW 410.4
Field pH	MCAWW 150.1	MCAWW 150.1
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7	MCAWW 200.7
N-Hexane Extractable Material (1664A)	CFR136A 1664A H	CFR136A 1664
Nitrate-Nitrite	MCAWW 353.2	MCAWW 353.2
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Total phosphorus	MCAWW 365.3	MCAWW 365.3
Total Kjeldahl Nitrogen	MCAWW 351.2	MCAWW 351.2
Total Suspended Solids	SM18 2540 D	SM18 2540 D

References:

- CFR136A "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
- MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
- SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.

METHOD / ANALYST SUMMARY

D8K260197

<u>ANALYTICAL METHOD</u>	<u>ANALYST</u>	<u>ANALYST ID</u>
CFR136A 1664A HEM	Reva M. Golden	010906
CFR136A 625	Mike G. Hoffman	001880
MCAWW 150.1	Outside Lab	OUT
MCAWW 200.7	David Wells	5099
MCAWW 200.7	Lynn-Anne Trudell	006645
MCAWW 200.7	Lynn-Anne Trudell	6645
MCAWW 350.1	Brett Wolff	009878
MCAWW 351.2	Brett Wolff	009878
MCAWW 353.2	Brett Wolff	009878
MCAWW 365.3	Bryan Gilbert	007254
MCAWW 410.4	ReAnna Davis	002266
SM18 2540 D	braden H. peterson	006733

References:

- CFR136A "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
- MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
- SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.

SAMPLE SUMMARY

D8K260197

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
K3PT8	001	WGSL-DB01E	11/22/08	12:30

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Waste Management, Inc.

Client Sample ID: WGSL-DB01E

GC/MS Semivolatiles

Lot-Sample #....: D8K260197-001 **Work Order #....:** K3PT81AJ **Matrix.....:** WATER
Date Sampled....: 11/22/08 12:30 **Date Received...:** 11/26/08
Prep Date.....: 11/27/08 **Analysis Date...:** 12/07/08
Prep Batch #....: 8332025 **Analysis Time...:** 23:18
Dilution Factor: 1

Method.....: CFR136A 625

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Alpha-Terpineol	ND	10	ug/L	2.0
Benzoic acid	ND	50	ug/L	10
Phenol	ND	10	ug/L	2.0
4-Methylphenol	ND	10	ug/L	0.25

SURROGATE	PERCENT	RECOVERY	
		RECOVERY	LIMITS
2-Fluorophenol	86	(49 - 120)	
Phenol-d5	92	(54 - 120)	
Nitrobenzene-d5	91	(56 - 120)	
2-Fluorobiphenyl	75	(52 - 120)	
2,4,6-Tribromophenol	110	(56 - 120)	
Terphenyl-d14	101	(50 - 120)	

Waste Management, Inc.

Client Sample ID: WGSL-DB01E

TOTAL Metals

Lot-Sample #....: D8K260197-001 **Matrix.....:** WATER
Date Sampled....: 11/22/08 12:30 **Date Received...:** 11/26/08

<u>PARAMETER</u>	<u>RESULT</u>	REPORTING			<u>METHOD</u>	<u>ANALYSIS DATE</u>	<u>WORK ORDER #</u>
		<u>LIMIT</u>	<u>UNITS</u>	<u> </u>			
Prep Batch #....: 8333139							
Iron	1200	100	ug/L		MCAWW 200.7	12/01-12/08/08 K3PT81AK	
		Dilution Factor: 1			Analysis Time...: 19:36	MDL.....:	22
Zinc	8.4 B	20	ug/L		MCAWW 200.7	12/01-12/08/08 K3PT81AL	
		Dilution Factor: 1			Analysis Time...: 14:31	MDL.....:	4.5

NOTE(S) :

B Estimated result. Result is less than RL.

Waste Management, Inc.

Client Sample ID: WGSL-DB01E

General Chemistry

Lot-Sample #....: D8K260197-001 **Work Order #....:** K3PT8 **Matrix.....:** WATER
Date Sampled...: 11/22/08 12:30 **Date Received...:** 11/26/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-		PREP BATCH #
					ANALYSIS DATE		
Ammonia as N	0.058 B	0.10	mg/L	MCAWW 350.1	12/05/08		8341041
		Dilution Factor: 1		Analysis Time...: 11:58		MDL.....:	0.022
Chemical Oxygen Demand (COD)	19 B	20	mg/L	MCAWW 410.4	12/03-12/04/08		8339306
		Dilution Factor: 1		Analysis Time...: 11:45		MDL.....:	4.1
Field pH	7.36	0.1	No Units	MCAWW 150.1	11/22/08		8337232
		Dilution Factor: 1		Analysis Time...: 12:30		MDL.....:	
HEM (Oil and Grease)	2.7 B	5.0	mg/L	CFR136A 1664A HEM	12/03/08		8338419
		Dilution Factor: 1		Analysis Time...: 08:30		MDL.....:	1.4
Nitrate-Nitrite	2.2	0.10	mg/L	MCAWW 353.2	12/05/08		8341049
		Dilution Factor: 1		Analysis Time...: 11:58		MDL.....:	0.019
Total phosphorus	0.21 J	0.050	mg/L	MCAWW 365.3	12/01-12/02/08		8337435
		Dilution Factor: 1		Analysis Time...: 14:00		MDL.....:	0.0050
Total Kjeldahl Nitrogen	0.67	0.50	mg/L	MCAWW 351.2	12/05-12/06/08		8341091
		Dilution Factor: 1		Analysis Time...: 10:08		MDL.....:	0.25
Total Suspended Solids	4.8	4.0	mg/L	SM18 2540 D	12/01/08		8336368
		Dilution Factor: 1		Analysis Time...: 11:15		MDL.....:	1.1

NOTE(S) :

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

QC DATA ASSOCIATION SUMMARY

D8K260197

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WATER	MCAWW 200.7		8333139	8333108
	WATER	MCAWW 351.2		8341091	8341063
	WATER	MCAWW 353.2		8341049	8341056
	WATER	CFR136A 625		8332025	8332009
	WATER	MCAWW 150.1		8337232	
	WATER	MCAWW 365.3		8337435	8338078
	WATER	SM18 2540 D		8336368	8336270
	WATER	CFR136A 1664A HEM		8338419	
	WATER	MCAWW 350.1		8341041	8341044
	WATER	MCAWW 410.4		8339306	8339318

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #....: D8K260197
MB Lot-Sample #: D8K270000-025
Analysis Date..: 12/07/08
Dilution Factor: 1

Work Order #....: K3REQ1AA
Prep Date.....: 11/27/08
Prep Batch #....: 8332025

Matrix.....: WATER
Analysis Time..: 22:59

PARAMETER	REPORTING		
	RESULT	LIMIT	UNITS
Benzoic acid	ND	50	ug/L
4-Methylphenol	ND	10	ug/L
Phenol	ND	10	ug/L
Alpha-Terpineol	ND	10	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	90	(49 - 120)
Phenol-d5	97	(54 - 120)
Nitrobenzene-d5	95	(56 - 120)
2-Fluorobiphenyl	78	(52 - 120)
2,4,6-Tribromophenol	95	(56 - 120)
Terphenyl-d14	96	(50 - 120)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD		METHOD
			RPD	LIMITS	
4-Methylphenol	89	(58 - 120)			CFR136A 625
	90	(58 - 120)	0.86	(0-39)	CFR136A 625
Phenol	90	(58 - 112)			CFR136A 625
	92	(58 - 112)	2.3	(0-30)	CFR136A 625
2-Chlorophenol	90	(57 - 120)			CFR136A 625
	91	(57 - 120)	1.2	(0-30)	CFR136A 625
1,3-Dichlorobenzene	72	(45 - 120)			CFR136A 625
	72	(45 - 120)	0.25	(0-47)	CFR136A 625
1,4-Dichlorobenzene	72	(45 - 120)			CFR136A 625
	72	(45 - 120)	0.080	(0-49)	CFR136A 625
1,2-Dichlorobenzene	75	(48 - 120)			CFR136A 625
	76	(48 - 120)	1.3	(0-42)	CFR136A 625
bis(2-Chloroisopropyl) ether	80	(57 - 120)			CFR136A 625
	80	(57 - 120)	0.050	(0-30)	CFR136A 625
N-Nitrosodi-n-propyl- amine	85	(58 - 120)			CFR136A 625
	86	(58 - 120)	0.66	(0-30)	CFR136A 625
Hexachloroethane	69	(43 - 113)			CFR136A 625
	68	(43 - 113)	1.4	(0-52)	CFR136A 625
Nitrobenzene	87	(58 - 120)			CFR136A 625
	87	(58 - 120)	0.050	(0-30)	CFR136A 625
Isophorone	87	(54 - 120)			CFR136A 625
	88	(54 - 120)	1.1	(0-30)	CFR136A 625
2-Nitrophenol	95	(59 - 120)			CFR136A 625
	99	(59 - 120)	4.4	(0-30)	CFR136A 625
2,4-Dimethylphenol	77	(44 - 119)			CFR136A 625
	80	(44 - 119)	3.5	(0-35)	CFR136A 625
bis(2-Chloroethoxy) methane	88	(56 - 120)			CFR136A 625
	91	(56 - 120)	3.0	(0-30)	CFR136A 625
2,4-Dichlorophenol	97	(60 - 120)			CFR136A 625
	101	(60 - 120)	4.1	(0-30)	CFR136A 625
1,2,4-Trichloro- benzene	80	(50 - 120)			CFR136A 625
	81	(50 - 120)	1.6	(0-35)	CFR136A 625

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
Naphthalene	83	(52 - 120)			CFR136A 625
	84	(52 - 120)	0.78	(0-30)	CFR136A 625
Hexachlorobutadiene	80	(49 - 116)			CFR136A 625
	79	(49 - 116)	0.99	(0-41)	CFR136A 625
4-Chloro-3-methylphenol	94	(63 - 120)			CFR136A 625
	96	(63 - 120)	2.4	(0-30)	CFR136A 625
2,4,6-Trichlorophenol	101	(60 - 120)			CFR136A 625
	103	(60 - 120)	1.8	(0-30)	CFR136A 625
2-Chloronaphthalene	90	(60 - 118)			CFR136A 625
	92	(60 - 118)	2.4	(0-30)	CFR136A 625
Dimethyl phthalate	95	(61 - 112)			CFR136A 625
	97	(61 - 112)	2.5	(0-30)	CFR136A 625
Acenaphthylene	92	(58 - 120)			CFR136A 625
	95	(58 - 120)	2.3	(0-30)	CFR136A 625
Acenaphthene	91	(58 - 120)			CFR136A 625
	92	(58 - 120)	1.3	(0-30)	CFR136A 625
2,4-Dinitrophenol	89	(36 - 121)			CFR136A 625
	93	(36 - 121)	4.5	(0-61)	CFR136A 625
4-Nitrophenol	86	(53 - 120)			CFR136A 625
	92	(53 - 120)	6.4	(0-42)	CFR136A 625
2,4-Dinitrotoluene	96	(60 - 120)			CFR136A 625
	100	(60 - 120)	3.7	(0-35)	CFR136A 625
Diethyl phthalate	93	(61 - 114)			CFR136A 625
	96	(61 - 114)	3.7	(0-30)	CFR136A 625
4-Chlorophenyl phenyl ether	95	(60 - 120)			CFR136A 625
	97	(60 - 120)	2.5	(0-30)	CFR136A 625
Fluorene	92	(60 - 120)			CFR136A 625
	95	(60 - 120)	2.7	(0-30)	CFR136A 625
4-Bromophenyl phenyl ether	100	(61 - 120)			CFR136A 625
	101	(61 - 120)	0.78	(0-34)	CFR136A 625
Hexachlorobenzene	104	(62 - 120)			CFR136A 625
	104	(62 - 120)	0.080	(0-30)	CFR136A 625
Pentachlorophenol	86	(49 - 120)			CFR136A 625
	88	(49 - 120)	3.3	(0-30)	CFR136A 625
Phenanthrene	91	(63 - 120)			CFR136A 625
	92	(63 - 120)	1.2	(0-30)	CFR136A 625

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

PARAMETER	PERCENT	RECOVERY	RPD	LIMITS	METHOD
	RECOVERY	LIMITS			
Anthracene	95	(62 - 120)			CFR136A 625
	96	(62 - 120)	1.6	(0-30)	CFR136A 625
Di-n-butyl phthalate	95	(62 - 118)			CFR136A 625
	96	(62 - 118)	0.75	(0-30)	CFR136A 625
Fluoranthene	101	(59 - 120)			CFR136A 625
	103	(59 - 120)	1.2	(0-30)	CFR136A 625
Pyrene	87	(60 - 115)			CFR136A 625
	89	(60 - 115)	2.4	(0-30)	CFR136A 625
Butyl benzyl phthalate	85	(60 - 120)			CFR136A 625
	84	(60 - 120)	1.2	(0-30)	CFR136A 625
3,3'-Dichlorobenzidine	65	(34 - 120)			CFR136A 625
	61	(34 - 120)	7.2	(0-50)	CFR136A 625
bis(2-Ethylhexyl) phthalate	84	(58 - 120)			CFR136A 625
	85	(58 - 120)	0.90	(0-30)	CFR136A 625
Chrysene	91	(60 - 120)			CFR136A 625
	94	(60 - 120)	3.3	(0-30)	CFR136A 625
Di-n-octyl phthalate	84	(59 - 120)			CFR136A 625
	85	(59 - 120)	1.4	(0-30)	CFR136A 625
Benzo(b)fluoranthene	84	(55 - 120)			CFR136A 625
	90	(55 - 120)	7.2	(0-90)	CFR136A 625
Benzo(k)fluoranthene	99	(57 - 120)			CFR136A 625
	97	(57 - 120)	1.2	(0-50)	CFR136A 625
Indeno(1,2,3-cd)pyrene	99	(56 - 120)			CFR136A 625
	104	(56 - 120)	5.5	(0-73)	CFR136A 625
Dibenz(a,h)anthracene	102	(58 - 120)			CFR136A 625
	109	(58 - 120)	6.2	(0-78)	CFR136A 625
Benzo(ghi)perylene	94	(52 - 120)			CFR136A 625
	98	(52 - 120)	4.1	(0-64)	CFR136A 625
4,6-Dinitro-2-methylphenol	96	(41 - 120)			CFR136A 625
	101	(41 - 120)	5.0	(0-55)	CFR136A 625
Benzidine	58	(10 - 218)			CFR136A 625
	59	(10 - 218)	1.2	(0-50)	CFR136A 625
Benzo(a)pyrene	74	(58 - 120)			CFR136A 625
	77	(58 - 120)	3.1	(0-73)	CFR136A 625
Hexachlorocyclopenta-diene	73	(10 - 120)			CFR136A 625
	74	(10 - 120)	1.3	(0-82)	CFR136A 625

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

PARAMETER	PERCENT RECOVERY	RECOVERY		RPD	LIMITS	METHOD
		LIMITS	RPD			
N-Nitrosodimethylamine	83	(52 - 120)				CFR136A 625
	86	(52 - 120)	2.6	(0-30)		CFR136A 625
N-Nitrosodiphenylamine	76	(10 - 203)				CFR136A 625
	79	(10 - 203)	4.2	(0-50)		CFR136A 625
2-Methyl-4,6-dinitro-phenol	96	(41 - 120)				CFR136A 625
	101	(41 - 120)	5.0	(0-55)		CFR136A 625
2-Methylphenol	88	(56 - 120)				CFR136A 625
	88	(56 - 120)	0.57	(0-35)		CFR136A 625
n-Decane	53	(28 - 120)				CFR136A 625
	53	(28 - 120)	0.070	(0-61)		CFR136A 625
2-Methylnaphthalene	85	(57 - 120)				CFR136A 625
	87	(57 - 120)	2.5	(0-30)		CFR136A 625
2,6-Dinitrotoluene	92	(61 - 120)				CFR136A 625
	93	(61 - 120)	1.4	(0-30)		CFR136A 625
Benzo(a)anthracene	93	(60 - 120)				CFR136A 625
	94	(60 - 120)	0.44	(0-30)		CFR136A 625
bis(2-Chloroethyl)-ether	83	(55 - 120)				CFR136A 625
	84	(55 - 120)	1.5	(0-30)		CFR136A 625

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorophenol	87	(53 - 120)
Phenol-d5	89	(53 - 120)
Nitrobenzene-d5	90	(57 - 120)
	92	(57 - 120)
2-Fluorobiphenyl	87	(59 - 120)
	86	(59 - 120)
2,4,6-Tribromophenol	89	(49 - 120)
	87	(49 - 120)
Terphenyl-d14	113	(50 - 120)
	113	(50 - 120)
	92	(63 - 120)
	95	(63 - 120)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: D8K260197 Work Order #...: K3REQ1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: D8K270000-025 K3REQ1AD-LCSD
 Prep Date.....: 11/27/08 Analysis Date...: 12/07/08
 Prep Batch #...: 8332025 Analysis Time...: 10:40
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE</u>	<u>MEASURED</u>		<u>PERCENT</u>	<u>RPD</u>	<u>METHOD</u>
	<u>AMOUNT</u>	<u>AMOUNT</u>	<u>UNITS</u>	<u>RECOVERY</u>		
4-Methylphenol	100	88.8	ug/L	89		CFR136A 625
	100	89.6	ug/L	90	0.86	CFR136A 625
Phenol	100	90.1	ug/L	90		CFR136A 625
	100	92.2	ug/L	92	2.3	CFR136A 625
2-Chlorophenol	100	89.9	ug/L	90		CFR136A 625
	100	91.1	ug/L	91	1.2	CFR136A 625
1,3-Dichlorobenzene	100	71.8	ug/L	72		CFR136A 625
	100	71.6	ug/L	72	0.25	CFR136A 625
1,4-Dichlorobenzene	100	72.0	ug/L	72		CFR136A 625
	100	71.9	ug/L	72	0.080	CFR136A 625
1,2-Dichlorobenzene	100	75.2	ug/L	75		CFR136A 625
	100	76.2	ug/L	76	1.3	CFR136A 625
bis(2-Chloroisopropyl) ether	100	79.7	ug/L	80		CFR136A 625
	100	79.6	ug/L	80	0.050	CFR136A 625
N-Nitrosodi-n-propyl-amine	100	85.4	ug/L	85		CFR136A 625
	100	86.0	ug/L	86	0.66	CFR136A 625
Hexachloroethane	100	68.6	ug/L	69		CFR136A 625
	100	67.6	ug/L	68	1.4	CFR136A 625
Nitrobenzene	100	86.9	ug/L	87		CFR136A 625
	100	86.8	ug/L	87	0.050	CFR136A 625
Isophorone	100	87.4	ug/L	87		CFR136A 625
	100	88.4	ug/L	88	1.1	CFR136A 625
2-Nitrophenol	100	95.2	ug/L	95		CFR136A 625
	100	99.5	ug/L	99	4.4	CFR136A 625
2,4-Dimethylphenol	100	76.9	ug/L	77		CFR136A 625
	100	79.7	ug/L	80	3.5	CFR136A 625
bis(2-Chloroethoxy) methane	100	87.9	ug/L	88		CFR136A 625
	100	90.7	ug/L	91	3.0	CFR136A 625
2,4-Dichlorophenol	100	97.0	ug/L	97		CFR136A 625
	100	101	ug/L	101	4.1	CFR136A 625
1,2,4-Trichlorobenzene	100	79.9	ug/L	80		CFR136A 625
	100	81.2	ug/L	81	1.6	CFR136A 625

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: D8K260197 Work Order #....: K3REQ1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: D8K270000-025 K3REQ1AD-LCSD

PARAMETER	SPIKE	MEASURED		PERCENT	RPD	METHOD
	AMOUNT	AMOUNT	UNITS	RECOVERY		
Naphthalene	100	83.5	ug/L	83		CFR136A 625
	100	84.2	ug/L	84	0.78	CFR136A 625
Hexachlorobutadiene	100	79.8	ug/L	80		CFR136A 625
	100	79.0	ug/L	79	0.99	CFR136A 625
4-Chloro-3-methylphenol	100	93.9	ug/L	94		CFR136A 625
	100	96.2	ug/L	96	2.4	CFR136A 625
2,4,6-Trichlorophenol	100	101	ug/L	101		CFR136A 625
	100	103	ug/L	103	1.8	CFR136A 625
2-Chloronaphthalene	100	90.2	ug/L	90		CFR136A 625
	100	92.4	ug/L	92	2.4	CFR136A 625
Dimethyl phthalate	100	94.7	ug/L	95		CFR136A 625
	100	97.1	ug/L	97	2.5	CFR136A 625
Acenaphthylene	100	92.5	ug/L	92		CFR136A 625
	100	94.6	ug/L	95	2.3	CFR136A 625
Acenaphthene	100	90.7	ug/L	91		CFR136A 625
	100	91.9	ug/L	92	1.3	CFR136A 625
2,4-Dinitrophenol	100	88.6	ug/L	89		CFR136A 625
	100	92.8	ug/L	93	4.5	CFR136A 625
4-Nitrophenol	100	85.9	ug/L	86		CFR136A 625
	100	91.5	ug/L	92	6.4	CFR136A 625
2,4-Dinitrotoluene	100	96.2	ug/L	96		CFR136A 625
	100	99.8	ug/L	100	3.7	CFR136A 625
Diethyl phthalate	100	93.0	ug/L	93		CFR136A 625
	100	96.4	ug/L	96	3.7	CFR136A 625
4-Chlorophenyl phenyl ether	100	95.0	ug/L	95		CFR136A 625
	100	97.5	ug/L	97	2.5	CFR136A 625
Fluorene	100	92.1	ug/L	92		CFR136A 625
	100	94.7	ug/L	95	2.7	CFR136A 625
4-Bromophenyl phenyl ether	100	100	ug/L	100		CFR136A 625
	100	101	ug/L	101	0.78	CFR136A 625
Hexachlorobenzene	100	104	ug/L	104		CFR136A 625
	100	104	ug/L	104	0.080	CFR136A 625
Pentachlorophenol	100	85.5	ug/L	86		CFR136A 625
	100	88.4	ug/L	88	3.3	CFR136A 625
Phenanthrene	100	91.1	ug/L	91		CFR136A 625
	100	92.2	ug/L	92	1.2	CFR136A 625

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: D8K260197 Work Order #....: K3REQ1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: D8K270000-025 K3REQ1AD-LCSD

PARAMETER	SPIKE	MEASURED		PERCENT	RPD	METHOD
	AMOUNT	AMOUNT	UNITS	RECOVERY		
Anthracene	100	94.7	ug/L	95		CFR136A 625
	100	96.2	ug/L	96	1.6	CFR136A 625
Di-n-butyl phthalate	100	94.8	ug/L	95		CFR136A 625
	100	95.6	ug/L	96	0.75	CFR136A 625
Fluoranthene	100	101	ug/L	101		CFR136A 625
	100	103	ug/L	103	1.2	CFR136A 625
Pyrene	100	86.8	ug/L	87		CFR136A 625
	100	88.9	ug/L	89	2.4	CFR136A 625
Butyl benzyl phthalate	100	84.9	ug/L	85		CFR136A 625
	100	83.9	ug/L	84	1.2	CFR136A 625
3,3'-Dichlorobenzidine	100	65.1	ug/L	65		CFR136A 625
	100	60.6	ug/L	61	7.2	CFR136A 625
bis(2-Ethylhexyl) phthalate	100	83.8	ug/L	84		CFR136A 625
	100	84.5	ug/L	85	0.90	CFR136A 625
Chrysene	100	90.7	ug/L	91		CFR136A 625
	100	93.8	ug/L	94	3.3	CFR136A 625
Di-n-octyl phthalate	100	83.5	ug/L	84		CFR136A 625
	100	84.7	ug/L	85	1.4	CFR136A 625
Benzo(b)fluoranthene	100	84.1	ug/L	84		CFR136A 625
	100	90.4	ug/L	90	7.2	CFR136A 625
Benzo(k)fluoranthene	100	98.6	ug/L	99		CFR136A 625
	100	97.4	ug/L	97	1.2	CFR136A 625
Indeno(1,2,3-cd)pyrene	100	98.7	ug/L	99		CFR136A 625
	100	104	ug/L	104	5.5	CFR136A 625
Dibenz(a,h)anthracene	100	102	ug/L	102		CFR136A 625
	100	109	ug/L	109	6.2	CFR136A 625
Benzo(ghi)perylene	100	94.4	ug/L	94		CFR136A 625
	100	98.4	ug/L	98	4.1	CFR136A 625
4,6-Dinitro-2-methylphenol	100	95.7	ug/L	96		CFR136A 625
	100	101	ug/L	101	5.0	CFR136A 625
Benzidine	150	87.4	ug/L	58		CFR136A 625
	150	88.5	ug/L	59	1.2	CFR136A 625
Benzo(a)pyrene	100	74.3	ug/L	74		CFR136A 625
	100	76.6	ug/L	77	3.1	CFR136A 625
Hexachlorocyclopenta-diene	100	73.0	ug/L	73		CFR136A 625
	100	74.0	ug/L	74	1.3	CFR136A 625

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: D8K260197 **Work Order #....:** K3REQ1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: D8K270000-025 **K3REQ1AD-LCSD**

PARAMETER	SPIKE	MEASURED		PERCENT RECOVERY	RPD	METHOD
	AMOUNT	AMOUNT	UNITS			
N-Nitrosodimethylamine	100	83.4	ug/L	83		CFR136A 625
	100	85.6	ug/L	86	2.6	CFR136A 625
N-Nitrosodiphenylamine	100	75.9	ug/L	76		CFR136A 625
	100	79.1	ug/L	79	4.2	CFR136A 625
2-Methyl-4,6-dinitro-phenol	100	95.7	ug/L	96		CFR136A 625
	100	101	ug/L	101	5.0	CFR136A 625
2-Methylphenol	100	87.9	ug/L	88		CFR136A 625
n-Decane	100	88.5	ug/L	88	0.57	CFR136A 625
	100	53.2	ug/L	53		CFR136A 625
2-Methylnaphthalene	100	53.2	ug/L	53	0.070	CFR136A 625
	100	85.3	ug/L	85		CFR136A 625
2,6-Dinitrotoluene	100	87.4	ug/L	87	2.5	CFR136A 625
	100	91.6	ug/L	92		CFR136A 625
Benzo(a)anthracene	100	92.9	ug/L	93	1.4	CFR136A 625
	100	93.1	ug/L	93		CFR136A 625
bis(2-Chloroethyl)-ether	100	93.6	ug/L	94	0.44	CFR136A 625
	100	82.9	ug/L	83		CFR136A 625
	100	84.2	ug/L	84	1.5	CFR136A 625

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorophenol	87	(53 - 120)
	89	(53 - 120)
Phenol-d5	90	(57 - 120)
	92	(57 - 120)
Nitrobenzene-d5	87	(59 - 120)
	86	(59 - 120)
2-Fluorobiphenyl	89	(49 - 120)
	87	(49 - 120)
2,4,6-Tribromophenol	113	(50 - 120)
	113	(50 - 120)
Terphenyl-d14	92	(63 - 120)
	95	(63 - 120)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Lot-Sample #....: D8K260197 Work Order #....: K3PT81AM Matrix.....: WATER
 MS Lot-Sample #: D8K260197-001
 Date Sampled...: 11/22/08 12:30 Date Received...: 11/26/08
 Prep Date.....: 11/27/08 Analysis Date...: 12/07/08
 Prep Batch #....: 8332025
 Dilution Factor: 1

PARAMETER	PERCENT	RECOVERY	METHOD
	RECOVERY	LIMITS	
4-Methylphenol	96	(57 - 120)	CFR136A 625
Phenol	99	(54 - 112)	CFR136A 625
2-Chlorophenol	97	(54 - 120)	CFR136A 625
1,3-Dichlorobenzene	83	(41 - 120)	CFR136A 625
1,4-Dichlorobenzene	83	(40 - 120)	CFR136A 625
1,2-Dichlorobenzene	99	(44 - 120)	CFR136A 625
bis(2-Chloroisopropyl) ether	89	(45 - 120)	CFR136A 625
N-Nitrosodi-n-propyl-amine	96	(55 - 120)	CFR136A 625
Hexachloroethane	77	(35 - 113)	CFR136A 625
Nitrobenzene	129	(35 - 164)	CFR136A 625
Isophorone	93	(59 - 120)	CFR136A 625
2-Nitrophenol	96	(55 - 120)	CFR136A 625
2,4-Dimethylphenol	91	(38 - 119)	CFR136A 625
bis(2-Chloroethoxy) methane	94	(55 - 120)	CFR136A 625
2,4-Dichlorophenol	103	(56 - 120)	CFR136A 625
1,2,4-Trichlorobenzene	90	(46 - 120)	CFR136A 625
Naphthalene	90	(51 - 120)	CFR136A 625
Hexachlorobutadiene	91	(41 - 116)	CFR136A 625
4-Chloro-3-methylphenol	96	(59 - 120)	CFR136A 625
2,4,6-Trichlorophenol	102	(58 - 120)	CFR136A 625
2-Chloronaphthalene	94	(54 - 118)	CFR136A 625
Dimethyl phthalate	96	(58 - 112)	CFR136A 625
Acenaphthylene	96	(53 - 120)	CFR136A 625
Acenaphthene	94	(56 - 120)	CFR136A 625
2,4-Dinitrophenol	63	(33 - 120)	CFR136A 625
4-Nitrophenol	82	(54 - 120)	CFR136A 625
2,4-Dinitrotoluene	94	(59 - 120)	CFR136A 625
Diethyl phthalate	95	(58 - 114)	CFR136A 625
4-Chlorophenyl phenyl ether	97	(58 - 120)	CFR136A 625
Fluorene	95	(57 - 120)	CFR136A 625
4-Bromophenyl phenyl ether	105	(57 - 120)	CFR136A 625

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

**Lot-Sample #...: D8K260197
MS Lot-Sample #: D8K260197-001**

Work Order #...: K3PT81AM

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>METHOD</u>
	<u>RECOVERY</u>	<u>LIMITS</u>	
Hexachlorobenzene	108	(57 - 120)	CFR136A 625
Pentachlorophenol	88	(51 - 120)	CFR136A 625
Phenanthrene	91	(56 - 120)	CFR136A 625
Anthracene	94	(57 - 120)	CFR136A 625
Di-n-butyl phthalate	96	(58 - 118)	CFR136A 625
Fluoranthene	94	(57 - 120)	CFR136A 625
Pyrene	87	(54 - 115)	CFR136A 625
Butyl benzyl phthalate	81	(50 - 120)	CFR136A 625
3,3'-Dichlorobenzidine	4.6 a	(34 - 120)	CFR136A 625
bis(2-Ethylhexyl) phthalate	84	(57 - 120)	CFR136A 625
Chrysene	83	(55 - 120)	CFR136A 625
Di-n-octyl phthalate	85	(57 - 120)	CFR136A 625
Benzo(b)fluoranthene	78	(52 - 120)	CFR136A 625
Benzo(k)fluoranthene	92	(50 - 120)	CFR136A 625
Indeno(1,2,3-cd)pyrene	89	(53 - 120)	CFR136A 625
Dibenz(a,h)anthracene	93	(54 - 120)	CFR136A 625
Benzo(ghi)perylene	83	(47 - 120)	CFR136A 625
4,6-Dinitro-2-methylphenol	66	(33 - 120)	CFR136A 625
Benzidine	0.0 a	(10 - 120)	CFR136A 625
Benzo(a)pyrene	69	(51 - 120)	CFR136A 625
Hexachlorocyclopenta-diene	61	(10 - 120)	CFR136A 625
N-Nitrosodimethylamine	91	(46 - 120)	CFR136A 625
N-Nitrosodiphenylamine	72	(40 - 120)	CFR136A 625
2-Methyl-4,6-dinitro-phenol	66	(33 - 120)	CFR136A 625
2-Methylphenol	99	(53 - 120)	CFR136A 625
n-Decane	65	(17 - 120)	CFR136A 625
2-Methylnaphthalene	93	(56 - 120)	CFR136A 625
2,6-Dinitrotoluene	90	(59 - 120)	CFR136A 625
Benzo(a)anthracene	85	(56 - 120)	CFR136A 625
bis(2-Chloroethyl)-ether	93	(51 - 120)	CFR136A 625

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>LIMITS</u>
	<u>RECOVERY</u>	<u>LIMITS</u>	
2-Fluorophenol	93		(49 - 120)
Phenol-d5	98		(54 - 120)
Nitrobenzene-d5	95		(56 - 120)
2-Fluorobiphenyl	95		(52 - 120)
2,4,6-Tribromophenol	118		(56 - 120)
Terphenyl-d14	98		(50 - 120)

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Lot-Sample #....: D8K260197 **Work Order #....:** K3PT81AM
MS Lot-Sample #: D8K260197-001

Matrix.....: WATER

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Lot-Sample #....: D8K260197 **Work Order #....:** K3PT81AM **Matrix.....:** WATER
MS Lot-Sample #: D8K260197-001
Date Sampled....: 11/22/08 12:30 **Date Received...:** 11/26/08
Prep Date.....: 11/27/08 **Analysis Date...:** 12/07/08
Prep Batch #....: 8332025
Dilution Factor: 1

PARAMETER	SAMPLE	SPIKE	MEASRD	PERCENT RECOVERY	METHOD
	AMOUNT	AMT	AMOUNT	UNITS	
4-Methylphenol	ND	119	114	ug/L	96
Phenol	ND	119	117	ug/L	99
2-Chlorophenol	ND	119	115	ug/L	97
1,3-Dichlorobenzene	ND	119	98.8	ug/L	83
1,4-Dichlorobenzene	ND	119	98.6	ug/L	83
1,2-Dichlorobenzene	ND	119	117	ug/L	99
bis(2-Chloroisopropyl) ether	ND	119	106	ug/L	89
N-Nitrosodi-n-propyl- amine	ND	119	114	ug/L	96
Hexachloroethane	ND	119	91.6	ug/L	77
Nitrobenzene	ND	119	154	ug/L	129
Isophorone	ND	119	111	ug/L	93
2-Nitrophenol	ND	119	114	ug/L	96
2,4-Dimethylphenol	ND	119	108	ug/L	91
bis(2-Chloroethoxy) methane	ND	119	112	ug/L	94
2,4-Dichlorophenol	ND	119	122	ug/L	103
1,2,4-Trichloro- benzene	ND	119	106	ug/L	90
Naphthalene	ND	119	107	ug/L	90
Hexachlorobutadiene	ND	119	108	ug/L	91
4-Chloro-3-methylphenol	ND	119	113	ug/L	96
2,4,6-Trichloro- phenol	ND	119	121	ug/L	102
2-Chloronaphthalene	ND	119	112	ug/L	94
Dimethyl phthalate	ND	119	114	ug/L	96
Acenaphthylene	ND	119	114	ug/L	96
Acenaphthene	ND	119	111	ug/L	94
2,4-Dinitrophenol	ND	119	75.4	ug/L	63
4-Nitrophenol	ND	119	97.8	ug/L	82
2,4-Dinitrotoluene	ND	119	111	ug/L	94
Diethyl phthalate	ND	119	113	ug/L	95
4-Chlorophenyl phenyl ether	ND	119	116	ug/L	97
Fluorene	ND	119	113	ug/L	95
4-Bromophenyl phenyl ether	ND	119	125	ug/L	105

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

**Lot-Sample #...: D8K260197
MS Lot-Sample #: D8K260197-001**

Work Order #...: K3PT81AM

Matrix.....: WATER

PARAMETER	SAMPLE	SPIKE	MEASRD	PERCENT	METHOD	
	AMOUNT	AMT	AMOUNT	UNITS	RECOVERY	METHOD
Hexachlorobenzene	ND	119	128	ug/L	108	CFR136A 625
Pentachlorophenol	ND	119	104	ug/L	88	CFR136A 625
Phenanthrene	ND	119	109	ug/L	91	CFR136A 625
Anthracene	ND	119	112	ug/L	94	CFR136A 625
Di-n-butyl phthalate	ND	119	114	ug/L	96	CFR136A 625
Fluoranthene	ND	119	112	ug/L	94	CFR136A 625
Pyrene	ND	119	103	ug/L	87	CFR136A 625
Butyl benzyl phthalate	ND	119	96.2	ug/L	81	CFR136A 625
3,3'-Dichlorobenzidine	ND	119	5.51 a	ug/L	4.6	CFR136A 625
bis(2-Ethylhexyl) phthalate	3.0	119	103	ug/L	84	CFR136A 625
Chrysene	ND	119	98.7	ug/L	83	CFR136A 625
Di-n-octyl phthalate	ND	119	101	ug/L	85	CFR136A 625
Benzo(b)fluoranthene	ND	119	92.9	ug/L	78	CFR136A 625
Benzo(k)fluoranthene	ND	119	109	ug/L	92	CFR136A 625
Indeno(1,2,3-cd)pyrene	ND	119	105	ug/L	89	CFR136A 625
Dibenz(a,h)anthracene	ND	119	111	ug/L	93	CFR136A 625
Benzo(ghi)perylene	ND	119	98.7	ug/L	83	CFR136A 625
4,6-Dinitro-2-methylphenol	ND	119	78.9	ug/L	66	CFR136A 625
Benzidine	ND	178	0.0 a	ug/L	0.0	CFR136A 625
Benzo(a)pyrene	ND	119	82.3	ug/L	69	CFR136A 625
Hexachlorocyclopenta-diene	ND	119	73.0	ug/L	61	CFR136A 625
N-Nitrosodimethylamine	ND	119	108	ug/L	91	CFR136A 625
N-Nitrosodiphenylamine	ND	119	85.2	ug/L	72	CFR136A 625
2-Methyl-4,6-dinitro-phenol	ND	119	78.9	ug/L	66	CFR136A 625
2-Methylphenol	ND	119	117	ug/L	99	CFR136A 625
n-Decane	ND	119	77.7	ug/L	65	CFR136A 625
2-Methylnaphthalene	ND	119	110	ug/L	93	CFR136A 625
2,6-Dinitrotoluene	ND	119	106	ug/L	90	CFR136A 625
Benzo(a)anthracene	ND	119	101	ug/L	85	CFR136A 625
bis(2-Chloroethyl)-ether	ND	119	111	ug/L	93	CFR136A 625

SURROGATE	PERCENT	RECOVERY	LIMITS
	RECOVERY		
2-Fluorophenol	93		(49 - 120)
Phenol-d5	98		(54 - 120)
Nitrobenzene-d5	95		(56 - 120)
2-Fluorobiphenyl	95		(52 - 120)
2,4,6-Tribromophenol	118		(56 - 120)
Terphenyl-d14	98		(50 - 120)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Lot-Sample #....: D8K260197 **Work Order #....:** K3PT81AM **Matrix.....:** WATER
MS Lot-Sample #: D8K260197-001

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #....: D8K260197

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
MB Lot-Sample #: D8K280000-139 Prep Batch #....: 8333139						
Iron	ND	100	ug/L	MCAWW 200.7	12/01-12/08/08	K3RQ11AF
		Dilution Factor: 1				
		Analysis Time..:	19:28			
Zinc	ND	20	ug/L	MCAWW 200.7	12/01-12/04/08	K3RQ11CA
		Dilution Factor: 1				
		Analysis Time..:	14:16			

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: D8K260197

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-ANALYSIS DATE</u>	<u>WORK ORDER #</u>
LCS Lot-Sample#: D8K280000-139 Prep Batch #....: 8333139					
Iron	94	(89 - 115)	MCAWW 200.7	12/01-12/08/08	K3RQ11AX Dilution Factor: 1 Analysis Time...: 19:32
Zinc	95	(85 - 111)	MCAWW 200.7	12/01-12/04/08	K3RQ11CC Dilution Factor: 1 Analysis Time...: 14:21
NOTE(S) :					

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #....: D8K260197

Matrix.....: WATER

PARAMETER	SPIKE	MEASURED	PERCNT		PREPARATION- ANALYSIS DATE	WORK ORDER #
	AMOUNT	AMOUNT	UNITS	RECVRY		
LCS Lot-Sample#: D8K280000-139 Prep Batch #....: 8333139						
Iron	1000	938	ug/L	94	MCAWW 200.7	12/01-12/08/08 K3RQ11AX
			Dilution Factor:	1	Analysis Time...:	19:32
Zinc	500	474	ug/L	95	MCAWW 200.7	12/01-12/04/08 K3RQ11CC
			Dilution Factor:	1	Analysis Time...:	14:21

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8K260197

Matrix.....: WATER

Date Sampled...: 11/22/08 09:00 Date Received..: 11/26/08

PARAMETER	PERCENT <u>RECOVERY</u>	RECOVERY <u>LIMITS</u>	RPD <u>RPD</u>	RPD <u>LIMITS</u>	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8K260257-001 Prep Batch #: 8333139							
Iron	95 94	(89 - 115) (89 - 115)	1.4	(0-20)	MCAWW 200.7 MCAWW 200.7	12/01-12/08/08 12/01-12/08/08	K3QG81CP K3QG81CQ
			Dilution Factor: 1				
			Analysis Time...: 20:16				
Zinc	93 91	(85 - 111) (85 - 111)	1.9	(0-20)	MCAWW 200.7 MCAWW 200.7	12/01-12/04/08 12/01-12/04/08	K3QG81DG K3QG81DH
			Dilution Factor: 1				
			Analysis Time...: 15:10				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8K260197

Matrix.....: WATER

Date Sampled...: 11/22/08 09:00 **Date Received...:** 11/26/08

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	PREPARATION- ANALYSIS DATE	WORK ORDER #
------------------	----------------------	------------------	----------------------	--------------	----------------------	------------	-----------------------------------	---------------------

MS Lot-Sample #: D8K260257-001 **Prep Batch #...:** 8333139

Iron

ND	1000	960	ug/L	95		MCAWW	200.7	12/01-12/08/08 K3QG81CP
ND	1000	947	ug/L	94	1.4	MCAWW	200.7	12/01-12/08/08 K3QG81CQ

Dilution Factor: 1

Analysis Time...: 20:16

Zinc

ND	500	466	ug/L	93		MCAWW	200.7	12/01-12/04/08 K3QG81DG
ND	500	457	ug/L	91	1.9	MCAWW	200.7	12/01-12/04/08 K3QG81DH

Dilution Factor: 1

Analysis Time...: 15:10

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #....: D8K260197

Matrix.....: WATER

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	PREP
		LIMIT	UNITS	ANALYSIS DATE			
Ammonia as N	ND	Work Order #: K374A1AA	MB Lot-Sample #:	D8L060000-041			
		0.10	mg/L	12/05/08	MCAWW 350.1		8341041
		Dilution Factor:	1				
		Analysis Time...:	11:58				
Chemical Oxygen Demand (COD)	ND	Work Order #: K34N11AA	MB Lot-Sample #:	D8L040000-306			
		20	mg/L	12/03-12/04/08	MCAWW 410.4		8339306
		Dilution Factor:	1				
		Analysis Time...:	11:45				
HEM (Oil and Grease)	ND	Work Order #: K33N91AA	MB Lot-Sample #:	D8L030000-419			
		5.0	mg/L	12/03/08	CFR136A 1664A HEM		8338419
		Dilution Factor:	1				
		Analysis Time...:	08:30				
Nitrate-Nitrite	ND	Work Order #: K38AT1AA	MB Lot-Sample #:	D8L060000-049			
		0.10	mg/L	12/05/08	MCAWW 353.2		8341049
		Dilution Factor:	1				
		Analysis Time...:	11:58				
Total phosphorus	0.0087 B	Work Order #: K3X6F1AA	MB Lot-Sample #:	D8L020000-435			
		0.050	mg/L	12/01-12/02/08	MCAWW 365.3		8337435
		Dilution Factor:	1				
		Analysis Time...:	14:00				
Total Kjeldahl Nitrogen	ND	Work Order #: K38FA1AA	MB Lot-Sample #:	D8L060000-091			
		0.50	mg/L	12/05-12/06/08	MCAWW 351.2		8341091
		Dilution Factor:	1				
		Analysis Time...:	10:08				
Total Suspended Solids	ND	Work Order #: K3V2G1AA	MB Lot-Sample #:	D8L010000-368			
		4.0	mg/L	12/01/08	SM18 2540 D		8336368
		Dilution Factor:	1				
		Analysis Time...:	11:15				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: D8K260197

Matrix.....: WATER

PARAMETER	PERCENT	RECOVERY	RPD	METHOD	PREPARATION-	PREP
	RECOVERY	LIMITS	RPD		ANALYSIS DATE	BATCH #
Ammonia as N		WO#: K374A1AC-LCS/K374A1AD-LCSD	LCS	Lot-Sample#:	D8L060000-041	
	98	(90 - 110)		MCAWW	350.1	12/05/08 8341041
	100	(90 - 110)	1.3 (0-10)	MCAWW	350.1	12/05/08 8341041
			Dilution Factor: 1		Analysis Time...: 11:58	
Chemical Oxygen Demand (COD)		WO#: K34N11AC-LCS/K34N11AD-LCSD	LCS	Lot-Sample#:	D8L040000-306	
	106	(80 - 115)		MCAWW	410.4	12/03-12/04/08 8339306
	103	(80 - 115)	2.7 (0-11)	MCAWW	410.4	12/03-12/04/08 8339306
			Dilution Factor: 1		Analysis Time...: 11:45	
HEM (Oil and Grease)		WO#: K33N91AC-LCS/K33N91AD-LCSD	LCS	Lot-Sample#:	D8L030000-419	
	91	(82 - 103)		CFR136A	1664A HEM	12/03/08 8338419
	94	(82 - 103)	2.7 (0-22)	CFR136A	1664A HEM	12/03/08 8338419
			Dilution Factor: 1		Analysis Time...: 08:30	
Nitrate-Nitrite		WO#: K38AT1AC-LCS/K38AT1AD-LCSD	LCS	Lot-Sample#:	D8L060000-049	
	98	(90 - 112)		MCAWW	353.2	12/05/08 8341049
	99	(90 - 112)	1.5 (0-10)	MCAWW	353.2	12/05/08 8341049
			Dilution Factor: 1		Analysis Time...: 11:58	
Total phosphorus		WO#: K3X6F1AC-LCS/K3X6F1AD-LCSD	LCS	Lot-Sample#:	D8L020000-435	
	102	(90 - 110)		MCAWW	365.3	12/01-12/02/08 8337435
	103	(90 - 110)	0.52 (0-20)	MCAWW	365.3	12/01-12/02/08 8337435
			Dilution Factor: 1		Analysis Time...: 14:00	
Total Kjeldahl Nitrogen		WO#: K38FA1AC-LCS/K38FA1AD-LCSD	LCS	Lot-Sample#:	D8L060000-091	
	92	(77 - 115)		MCAWW	351.2	12/05-12/06/08 8341091
	91	(77 - 115)	0.36 (0-25)	MCAWW	351.2	12/05-12/06/08 8341091
			Dilution Factor: 1		Analysis Time...: 10:08	
Total Suspended Solids		WO#: K3V2G1AC-LCS/K3V2G1AD-LCSD	LCS	Lot-Sample#:	D8L010000-368	
	91	(86 - 114)		SM18	2540 D	12/01/08 8336368
	91	(86 - 114)	0.0 (0-20)	SM18	2540 D	12/01/08 8336368
			Dilution Factor: 1		Analysis Time...: 11:15	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #....: D8K260197

Matrix.....: WATER

PARAMETER	SPIKE	MEASURED		PERCNT			METHOD	PREPARATION-	PREP
	AMOUNT	AMOUNT	UNITS	RECVRY	RPD				
Ammonia as N				WO#: K374A1AC-LCS/K374A1AD-LCSD	LCS	Lot-Sample#:	D8L060000-041		
	4.00	3.93	mg/L	98		MCAWW	350.1	12/05/08	8341041
	4.00	3.98	mg/L	100	1.3	MCAWW	350.1	12/05/08	8341041
				Dilution Factor: 1			Analysis Time...: 11:58		
Chemical Oxygen Demand (COD)				WO#: K34N11AC-LCS/K34N11AD-LCSD	LCS	Lot-Sample#:	D8L040000-306		
	100	106	mg/L	106		MCAWW	410.4	12/03-12/04/08	8339306
	100	103	mg/L	103	2.7	MCAWW	410.4	12/03-12/04/08	8339306
				Dilution Factor: 1			Analysis Time...: 11:45		
HEM (Oil and Grease)				WO#: K33N91AC-LCS/K33N91AD-LCSD	LCS	Lot-Sample#:	D8L030000-419		
	40.0	36.4	mg/L	91		CFR136A	1664A HEM	12/03/08	8338419
	40.0	37.4	mg/L	94	2.7	CFR136A	1664A HEM	12/03/08	8338419
				Dilution Factor: 1			Analysis Time...: 08:30		
Nitrate-Nitrite				WO#: K38AT1AC-LCS/K38AT1AD-LCSD	LCS	Lot-Sample#:	D8L060000-049		
	4.00	3.92	mg/L	98		MCAWW	353.2	12/05/08	8341049
	4.00	3.98	mg/L	99	1.5	MCAWW	353.2	12/05/08	8341049
				Dilution Factor: 1			Analysis Time...: 11:58		
Total phosphorus				WO#: K3X6F1AC-LCS/K3X6F1AD-LCSD	LCS	Lot-Sample#:	D8L020000-435		
	0.500	0.512	mg/L	102		MCAWW	365.3	12/01-12/02/08	8337435
	0.500	0.514	mg/L	103	0.52	MCAWW	365.3	12/01-12/02/08	8337435
				Dilution Factor: 1			Analysis Time...: 14:00		
Total Kjeldahl Nitrogen				WO#: K38FA1AC-LCS/K38FA1AD-LCSD	LCS	Lot-Sample#:	D8L060000-091		
	3.00	2.75	mg/L	92		MCAWW	351.2	12/05-12/06/08	8341091
	3.00	2.74	mg/L	91	0.36	MCAWW	351.2	12/05-12/06/08	8341091
				Dilution Factor: 1			Analysis Time...: 10:08		
Total Suspended Solids				WO#: K3V2G1AC-LCS/K3V2G1AD-LCSD	LCS	Lot-Sample#:	D8L010000-368		
	100	91.0	mg/L	91		SM18	2540 D	12/01/08	8336368
	100	91.0	mg/L	91	0.0	SM18	2540 D	12/01/08	8336368
				Dilution Factor: 1			Analysis Time...: 11:15		

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: D8K260197

Matrix.....: WATER

Date Sampled...: 11/24/08 11:15 **Date Received..:** 11/25/08

PARAMETER	PERCENT	RECOVERY	RPD	METHOD	PREPARATION-	PREP
	RECOVERY	LIMITS	RPD		ANALYSIS	DATE
Ammonia as N		WO#: K3PT81AQ-MS/K3PT81AR-MSD	MS	Lot-Sample #:	D8K260197-001	
	101	(90 - 110)		MCAWW 350.1	12/05/08	8341041
	101	(90 - 110) 0.68 (0-10)		MCAWW 350.1	12/05/08	8341041
		Dilution Factor: 1				
		Analysis Time...: 11:58				
Chemical Oxygen Demand (COD)		WO#: K3N981A6-MS/K3N981A7-MSD	MS	Lot-Sample #:	D8K260147-004	
	89	(74 - 109)		MCAWW 410.4	12/03-12/04/08	8339306
	102 *	(74 - 109) 14 (0-11)		MCAWW 410.4	12/03-12/04/08	8339306
		Dilution Factor: 1				
		Analysis Time...: 11:45				
Nitrate-Nitrite		WO#: K3PT81AT-MS/K3PT81AU-MSD	MS	Lot-Sample #:	D8K260197-001	
	81	(72 - 113)		MCAWW 353.2	12/05/08	8341049
	81	(72 - 113) 0.37 (0-17)		MCAWW 353.2	12/05/08	8341049
		Dilution Factor: 1				
		Analysis Time...: 11:58				
Total phosphorus		WO#: K3EQ31ED-MS/K3EQ31EE-MSD	MS	Lot-Sample #:	D8K210149-001	
	83	(71 - 128)		MCAWW 365.3	12/01-12/02/08	8337435
	75	(71 - 128) 4.7 (0-22)		MCAWW 365.3	12/01-12/02/08	8337435
		Dilution Factor: 1				
		Analysis Time...: 14:00				
Total Kjeldahl Nitrogen		WO#: K3LQC1CR-MS/K3LQC1CT-MSD	MS	Lot-Sample #:	D8K250141-001	
	90	(54 - 131)		MCAWW 351.2	12/05-12/06/08	8341091
	90	(54 - 131) 0.85 (0-38)		MCAWW 351.2	12/05-12/06/08	8341091
		Dilution Factor: 1				
		Analysis Time...: 10:08				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #....: D8K260197

Matrix.....: WATER

Date Sampled...: 11/24/08 11:15 **Date Received..:** 11/25/08

PARAMETER	SAMPLE	SPIKE	MEASRD		PERCNT			PREPARATION-	PREP
	AMOUNT	AMT	AMOUNT	UNITS	RECVRY	RPD	METHOD		
Ammonia as N									
			WO#:	K3PT81AQ-MS/K3PT81AR-MSD	MS	Lot-Sample	#:	D8K260197-001	
0.058	4.00	4.08	mg/L	101		MCAWW 350.1		12/05/08	8341041
0.058	4.00	4.11	mg/L	101	0.68	MCAWW 350.1		12/05/08	8341041
			Dilution Factor:	1					
			Analysis Time..:	11:58					
Chemical Oxygen Demand (COD)									
ND	50.0	44.3	mg/L	89		MCAWW 410.4		12/03-12/04/08	8339306
ND	50.0	51.0 *	mg/L	102	14	MCAWW 410.4		12/03-12/04/08	8339306
			Dilution Factor:	1					
			Analysis Time..:	11:45					
Nitrate-Nitrite									
			WO#:	K3PT81AT-MS/K3PT81AU-MSD	MS	Lot-Sample	#:	D8K260197-001	
2.2	4.00	5.48	mg/L	81		MCAWW 353.2		12/05/08	8341049
2.2	4.00	5.46	mg/L	81	0.37	MCAWW 353.2		12/05/08	8341049
			Dilution Factor:	1					
			Analysis Time..:	11:58					
Total phosphorus									
			WO#:	K3EQ31ED-MS/K3EQ31EE-MSD	MS	Lot-Sample	#:	D8K210149-001	
0.48	0.500	0.890	mg/L	83		MCAWW 365.3		12/01-12/02/08	8337435
0.48	0.500	0.849	mg/L	75	4.7	MCAWW 365.3		12/01-12/02/08	8337435
			Dilution Factor:	1					
			Analysis Time..:	14:00					
Total Kjeldahl Nitrogen									
			WO#:	K3LQC1CR-MS/K3LQC1CT-MSD	MS	Lot-Sample	#:	D8K250141-001	
ND	3.00	2.71	mg/L	90		MCAWW 351.2		12/05-12/06/08	8341091
ND	3.00	2.69	mg/L	90	0.85	MCAWW 351.2		12/05-12/06/08	8341091
			Dilution Factor:	1					
			Analysis Time..:	10:08					

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

* Relative percent difference (RPD) is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: D8K260197 **Work Order #...:** K3PMX-SMP **Matrix.....:** WATER

K3PMX-DUP

Date Sampled...: 11/25/08 12:35 **Date Received..:** 11/26/08

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u>	<u>UNITS</u>	<u>RPD</u>	<u>RPD</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>PREP</u>	<u>BATCH #</u>
							<u>ANALYSIS DATE</u>		
Total Suspended Solids	ND	ND	mg/L	0	(0-20)	SM18 2540 D	12/01/08		8336368
			Dilution Factor:	1		Analysis Time...:	11:15		

**Chain of
Custody Record**

TAL-4124-280 (1007)

Drinking Water? Yes No

Temperature on Receipt 27°C 16.2 & 11/11/08

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sampler ID _____
Project Manager Justin Loftin
Telephone Number (Area Code)/Fax Number (808) 668-3485 ext. 16
Date 11/22/08 Chain of Custody Number 102906

Address 841 Bishop St Suite 500
City Honolulu State HI Zip Code 96813
Site Contact Justin Loftin Lab Contact _____
Carrier/Warehouse Number FedEx 8603 8283 9317
Contract/Purchase Order/Quote No. _____

Sample I.D. No. and Description (Containers for each sample may be combined on one line)
WGSL - D301E
Date 11/22/08 Time 1830 Air Aqueous Sed. Soil
Unpres. H₂SO₄ HNO₃ HCl NaOH ZnAc/NaOH
Matrix _____ Containers & Preservatives _____
TSS N K NO₃ NO₂ NH₄⁺ Ammonia COD Phosphorus Grease Total Oil & Grease Total Suspended Solids Total Dissolved Solids Total Hardness Iron SVOCs SVOCs alpha-Turpene benzene benzoic acid Cresol Phenol

Special Instructions/ Conditions of Receipt

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

24 Hours

48 Hours

7 Days

14 Days

21 Days

Other _____

QC Requirements (Specify)

1. Relinquished By W.H. M.

Date 11/24/08 Time 0915

1. Received By John Smith

Date 11/24/08 Time 0900

2. Received By _____

Date _____ Time _____

3. Received By _____

Date _____ Time _____

3. Relinquished By _____

Comments _____

FIELD INFORMATION FORM



Site Name: WGSL

Site No: **Sample Point:**

WGS-L-

Sample ID: DB01E

This Waste Management Field Information Form is Required

This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e., with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID:

081C260997-001

I certify that sampling procedures were in accordance with applicable EPA, State, and WMA protocols (if more than one sampler, all should sign):

(1,22,08)

ies were in accordance with applicable EPA, S
Michelle Mason

ate, and WM protocols (if more than one samp

old sign):
Earth Tech

Data

1

Singer

8

Test American

DISTRIBUTION: **WHITE/ORIGINAL** - Stays with Sample, **YELLOW** - Returned to Client, **PINK** - Field Copy